

ABSTRACT OF THE DISCLOSURE

A multiplexing and transmission apparatus including a transmitter and a receiver is provided. The transmitter includes a control pulses generating
5 circuit generating control pulses having different phases; channel-frame generating circuits each outputting low-speed frame signal in synchronization with the control pulse; and a multiplexing circuit multiplexing the low-speed frame signals into the
10 high-speed serial signal. The receiver includes a demultiplexer demultiplexing high-speed serial signal into low-speed frame signals; channel-frame synchronization circuits each generating a frame pulse corresponding to the low-speed frame signal;
15 a switching circuit switching each of the low-speed frame signals to an appropriate port of the channel; and a switch controller circuit controlling the switching circuit.

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